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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEUNG, CHRISTINA Y

ART UNIT PAPER NUMBER

2633

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,715

Applicant(s)

GRUIA, DUMITRU

Examiner

Christina Y. Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 3. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-26 and 28-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Focsaneanu et al. (US 5,828,666 A).

Regarding claims 1 and 13, Focsaneanu et al. disclose a system and method for managing voice channels that are carried over a plurality of point-to-multipoint optical networks (Figure 7), wherein each of the point-to-multipoint optical networks is connected to one of a plurality of access modules (such as module 208), each access module including a central office (“PSTN” in Figure 7) interface, a packet network (“Data Network” in Figure 7) interface, and at least one optical line terminal that is optically connected (via lines 210) to a plurality of optical network units by a point-to-multipoint optical link, the plurality of access modules being connected by a packet network connection through the packet network interfaces. Although Figure 7 does not explicitly show that the network units are optically connected, Focsaneanu et al. do further disclose that they may be connected optically as desired (column 7, lines 52-61). Also, only one of a plurality of access modules is explicitly shown in Figure 7, but Figure 9 illustrates multiple access modules in a larger system.

Focsaneanu et al. further disclose that the system for managing voice channels comprises means for distributing demand for voice channels among a plurality of the CO interfaces by

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establishing voice channels that utilize the packet network connection to access at least one of the CO interfaces (column 11, lines 2-12; Figure 7 also shows the connection between the packet network and the CO)

Regarding claims 9 and 21, as similarly discussed above with regard to claims 1 and 13, Focsaneanu et al. disclose a system and method for managing voice channels that are carried over a plurality of point-to-multipoint optical networks comprising:

means for distributing demand for voice channels that connect through a central office interface among a plurality of point-to-multipoint optical networks, wherein the plurality of CO interfaces are connected by a packet network connection; and

means for establishing voice channels having transmission paths that include one of the CO interfaces, the packet network connection, and at least one the plurality of point-to-multipoint optical networks (Figure 7).

Regarding claims 2-4 and 10, 11, 14-16, 22 and 23, Focsaneanu et al. disclose receiving channel utilization information from the CO interfaces or the ONUs or both to determine how to distribute voice channels among the CO interfaces (column 10, lines 57-65). Regarding claims 4, 11, 16, and 23 in particular, they further disclose that a minimum channel capacity is maintained in the system (column 11, lines 3-12; column 12, lines 15-24).

Regarding claims 5 and 17, Focsaneanu et al. disclose establishing a voice channel having a transmission path that includes an optical link between a first ONU (such as a telephone in Figure 7) and a first access module 208, a packet network connection that connects the first access module to a second access module (through the data network shown in Figure 7; a second access module is not explicitly shown in Figure 7, but for example, Figure 9 illustrates multiple

access modules in a larger system), and a CO interface that is part of the second access module, wherein the first and second access modules are included within the plurality of access modules.

Regarding claims 6 and 18, Focsaneanu et al. disclose transmitting voice information between the first ONU and the CO interface that is part of the second access module via the optical link between the first ONU and the first access module and via the packet network connection that connects the first access module and the second access module (Figure 10, which shows how voice information can be transmitted through the packet network and the CO; column 9, lines 10-18; column 11, lines 3-12).

Regarding claims 7 and 19, Focsaneanu et al. disclose that the voice information may be transmitted in Internet protocol (IP) packets between the first ONU and the CO interface that is part of the second access module (column 11, lines 3-12).

Regarding claims 8 and 20, Focsaneanu et al. disclose establishing IP address for voice-carrying IP packets which cause voice channels to utilize the packet network connection between two of the access modules (column 11, lines 3-12).

Regarding claims 12 and 24, Focsaneanu et al. disclose establishing IP addresses for voice-carrying IP packets which cause transmission paths to include one of the CO interfaces, the packet network connection, and at least one of the plurality of point-to-multipoint optical networks (column 11, lines 3-12).

Regarding claim 25, Focsaneanu et al. disclose a system for managing voice channels that are carried over a plurality of point-to-multipoint optical networks comprising:

a plurality of access modules (such as access module 208; Figure 7 does not explicitly show additional access modules, but they do disclose that a plurality of modules are used in the

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context of a larger system, as for example shown in Figure 9), wherein each access module aggregates a plurality of point-to-multipoint optical networks;

a packet network connection that links the plurality of access modules to each other (“Data Network” in Figure 7);

each of the plurality of access modules including:

a CO interface that links voice channels to a CO (“PSTN” in Figure 7);

a plurality of point-to-multipoint optical networks with each point-to-multipoint optical network including an optical line terminal that is optically connected to a plurality of optical network units (including terminals and telephones in Figure 7) via an OLT-specific point-to-multipoint optical link (they also disclose that the system may include optical connections; column 7, lines 52-61); and

a packet network interface that links the access module to the packet network connection (Figure 7 shows connections between the module and the data network).

They further disclose means, associated with the plurality of access modules, for establishing a voice channel having a transmission path that includes an ONU that is connected to a first access module, the packet network connection, and a CO interface of a second access module, wherein the first and second access modules are included within the plurality of access modules. Figure 7, for example, shows a path from an ONU to the first access module, to the data network (the packet network), to the PSTN (the CO), and onward to the CO interface of another access module (not shown; see also Figure 9 and column 9, lines 10-18).

Regarding claim 26, Focsaneanu et al. disclose that the means for establishing a voice channel includes means for distributing demand for voice channels among the plurality of CO

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interfaces so that the total capacity of the plurality of CO interfaces is available to support voice channel demand for any of the ONUs (column 11, lines 3-12; column 12, lines 15-24).

Regarding claim 28, Focsaneanu et al. disclose that the means for establishing a voice channel includes means for distributing demand for voice channels among the plurality of CO interfaces so that a minimum threshold of available channel capacity is maintained at each of the CO interfaces (column 11, lines 2-12; column 12, lines 15-24).

Regarding claim 29, Focsaneanu et al. disclose that the means for establishing a voice channel includes circuit network logic (such as elements including processor 246) for determining which of the plurality of CO interfaces should be utilized to establish a new voice channel.

Regarding claims 30 and 31, Focsaneanu et al. disclose that the circuit network logic may receive channel utilization information from the plurality of CO interfaces or ONUs (column 10, lines 57-65).

Regarding claim 32, Focsaneanu et al. disclose that the means for establishing a voice channel includes packet network logic for establishing protocol addresses which cause the transmission path to include the ONU that is connected to the first access module, the packet network connection, and the CO interface of the second access module (column 11, lines 2-12). Similarly, regarding claim 33, Focsaneanu et al. disclose that voice information carried within the established voice channel may be carried in IP packets between the ONU that is connected to the first access module and the CO interface of the second access module (column 11, lines 2-12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Focsaneanu et al.

Regarding claim 27, Focsaneanu et al. do not specifically disclose that the means for establishing a voice channel includes means for distributing demand for voice channels at the CO interface of the first access module to the CO interface of the second access module. However, they do suggest that voice information may be routed through various paths, including through a packet network, as required by bandwidth limitations or other factors (column 11, lines 548-67; column 12, lines 1-47). They further suggest that access modules are connected through both packet networks and through a CO. It would have been obvious to a person of ordinary skill in the art to distribute demand for voice channels to the CO interface of a second access module (via the packet network, for example) in the system disclosed by Focsaneanu et al. if the connection between the CO and the first access module were disabled or busy.

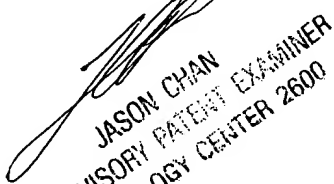
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 703-605-1186. The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



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